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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/848,256 05/04/01 MISUMI

K 401188

023548  
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MM91/1101

EXAMINER

THAI, J

ART UNIT

PAPER NUMBER

2811

DATE MAILED:

11/01/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/848,256

Applicant(s)

MISUMI ET AL.

Examiner

Luan Thai

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of "a sealed semiconductor device comprising **semiconductor chip portions**" in claim 1, and the limitation of "almost rectangular semiconductor chip portions" in claim 13, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

### *Claim Objections*

3. Claims 6 and 13 are objected to because of the following informalities: the limitation of "said internal leads" in line 2 of claim 6 should be changed to --said internal lead portions--, and the limitation of "said internal lead" in lines 5 of claim 13 should be changed to --said internal lead portion--. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims **1-12** are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification, as originally filed, does not disclose that a sealed semiconductor device comprises semiconductor chip portions, as recited in claim 1. Instead, the specification discloses "a sealed semiconductor device comprising semiconductor chip portion" (Applicant's specification page 3, lines 23-29).

Claims 2-12 are rejected since each includes the limitations of independent claim

1.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims **1-16** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the limitation of "semiconductor chip portions" is unclear as to whether it recites plural portions on a semiconductor chip or the chip itself. Notice that the specification discloses "a sealed semiconductor device having a semiconductor chip portion" (Applicant's specification page 3, lines 23-29).

In claim 3, it's unclear of how one tape member (as recited in claim 2) can be located in many areas peripheral to the semiconductor chip portions.

In claim 13, it's unclear how one pad portion can be located centrally on semiconductor chip portions.

Claims 2-12 and 14-16 are rejected since each includes the limitations of independent claims 1 and 13 respectively.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-11 and 13-16, insofar as in compliance with 35 USC 112, are rejected under 35 U.S.C. 102(b) as being anticipated by Murakami et al. (5,612,569).

Regarding claims 1-3, 13-16, Murakami et al (figures 1-77), specifically figures 5, 11, 20-23, 29, 48, show a sealed semiconductor device comprising: a almost-rectangular semiconductor chip portions; a lead frame portion 3 (figures 5, 11, 20-23) including internal lead portions 3A1 extending on surfaces of the semiconductor chip portions toward pad portions BP (figure 1) located nearly centrally on the semiconductor chip portions; holding members (or holding lead portions 3c), which include internal lead portions and tape members 4 located in areas peripheral to the semiconductor chip portions, holding the semiconductor chip portions and the internal lead portions at intervals and fixed to the semiconductor chip portions, wherein the holding lead portions 3c are dummy

internal lead portions, wherein the internal lead portions 3A1 are set toward the pad portions BP of the semiconductor chip portions from a pair of faced sides of the chip portions and holding lead portions 3C are arranged toward the chip portions from the other pair of sides facing the direction almost orthogonal to the pair of faced sides.

Regarding claims 4-6, Murakami et al further disclose the holding member 3C including protrusions being bended in the internal lead portions and protruding toward the chip portions, wherein crest portions of the bends of the internal leads 3C contact the semiconductor chip portions (figure 47).

Regarding claims 7-8, Murakami et al further disclose the internal lead portions including an original internal lead 3A1 electrically connected with the chip portions and dummy internal leads 3C, and the protrusions being part of the dummy internal lead portions, wherein the chip portions are almost rectangular, and the original internal lead is 3A1 is set toward a pad portions BP formed nearby centers of the semiconductor chip portions from a pair of faced sides of the chip portions, and the dummy internal leads 3C are arranged toward the chip portions from the other pair of sides facing the direction almost orthogonal to the pair of faced sides (see figure 47).

Regarding claims 1, 4 and 9-11, Murakami et al (figures 1-77), specifically figures 47-48, show a sealed semiconductor device comprising: semiconductor chip portions including a semiconductor chip body 1 and a die pad which is a portion of the elements 301c from which the semiconductor chip body 1 mounted

on (see figures 47-48); a lead frame portion 3 (figures 5, 11, 20-23) including internal lead portions 3A1 extending on surfaces of the semiconductor chip portions; holding members which are a middle portion of element 301c connected or fixed to the die pad at areas peripheral to the semiconductor chip body.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 12, insofar as in compliance with 35 USC 112, is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (5,612,569).

Applicant's claim **12** does not distinguish over the Murakami et al. reference regardless of the process used to make the device package, because only the final product is relevant, not the process of making such as "*an injection port of a mold when sealing the semiconductor chip portions with a resin is located opposite the holding members*". Note that a "product by process" claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); and In

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re Marrosi et al., 218 USPQ 289, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear. See also MPEP 706.03(e).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luan Thai whose telephone number is (703) 308-1211. The examiner can normally be reached on 7:00 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Luan Thai  
October 24, 2001

Steven Loke  
Primary Examiner

